

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 Claim 1 (currently amended): A loosening-proof nut
2 comprising a nut body having a central female thread with
3 a nominal diameter d , the nut body also having ~~two or~~
4 more than two slits formed such as to be symmetrical with
5 respect to the axis of the nut, the more than two slits
6 radially penetrate the female thread from the outer
7 periphery of the nut and ~~be~~ are located ~~at an axial~~
8 ~~position~~ on the an upper side of the an axial center
9 position of the nut body, the slits defining push parts,
10 which ~~are~~ have been bent downward ~~by causing~~ resulting in
11 plastic deformation.

1 Claim 2 (currently amended): A loosening-proof nut
2 comprising a nut body having a central female thread with
3 a nominal diameter d , the nut body having an upper
4 portion and a lower portion, wherein the maximum outer
5 diameter of the upper portion is less than the minimum
6 outer diameter of the lower portion, the nut body also
7 having two slits formed such as to be symmetrical with
8 respect to the axis of the nut, the two slits radially
9 penetrate the female thread from the outer periphery of
10 the nut, said slits are located in the upper portion of
11 the nut body and are located at an axial position on an
12 upper side of an axial center position of the nut body,
13 the slits defining push parts, which are have been bent
14 downward resulting in plastic deformation,
15 ~~The loosening-proof nut according to claim 1, wherein the~~
16 slits consist of a first and a second slit symmetrical
17 with respect to the axis of the nut, the push parts

18 consist of a first and a second push part defined in ~~an~~
19 the upper part portion of the nut body by the first and
20 second slit, ~~wherein the nut further comprises a lower~~
21 ~~part of the nut body below the first and second slits,~~
22 ~~and wherein and the distance b between the bottoms of the~~
23 ~~first and second slit is in a range of 0.15 to 0.8 times~~
24 ~~the nominal diameter d.~~

1 Claim 3 (currently amended): The loosening-proof nut
2 according to claim 2, wherein the nut body has a height
3 h, a bottom width g of first and second slits, and a
4 thickness of first and second push parts a, the height h
5 ~~of the nut body~~ is at least 0.5 times the nominal
6 diameter d, the bottom width g of the first and second
7 slits is 0.05 to 0.2 times the nominal diameter d, the
8 thickness a of the first and second push parts is 0.1 to
9 0.3 times the nominal diameter d.

1 Claim 4 (currently amended): The loosening-proof nut
2 according to claim 2, wherein a width s defines slit gap
3 at the tips of the first and second push parts, the width
4 ~~s of the tip of the first and second push part~~ is in a
5 range of 0 to 0.5 times ~~the~~ a bottom width g of the first
6 and second slits.

1 Claim 5 (currently amended): The loosening-proof nut
2 according claim 2, wherein the first and second slits are
3 at an angle between 70 and 90 degrees with respect to the
4 axis of the nut body and are formed substantially
5 symmetrically with respect to the axis of the central
6 female thread ~~screw~~.

1 Claim 6 (currently amended): The loosening-proof nut
2 according to claim 2, wherein the upper ~~part~~ portion of
3 the nut body inclusive of the first and second push parts
4 is circular in plan view shape.

1 Claim 7 (currently amended): A nut having an internal
2 female thread, a first opening from which a male thread
3 to be screwed is inserted, and a second opening, from
4 which the inserted male thread gets out; wherein the nut
5 comprises at least a two pairs ~~pair~~ of slits formed at an
6 axial position closer to the second opening and such as
7 to be symmetrical with respect to the axis of the nut and
8 to radially partly penetrate the female thread from the
9 outer periphery of the nut, a first axial part defined on
10 the first opening side and a second axial part defined on
11 the second opening side bounded by the ~~pair~~ pairs of
12 slits, and the female thread parts of the first and
13 second axial parts have the same shape parameter, and the
14 direction of the surface, in which the female thread part
15 in the second axial part is formed, is deviated from the
16 axial direction as a result of plastic deformation due to
17 pressure that had been exerted on the nut.

1 Claim 8 (currently amended): A nut having an internal
2 female thread, a first opening from which a male thread
3 to be screwed is inserted, and a second opening, from
4 which the inserted male thread gets out; wherein the nut
5 comprises at least a pair of slits formed at an axial
6 position closer to the second opening and such as to be
7 symmetrical with respect to the axis of the nut and to
8 radially partly penetrate the female thread from the
9 outer periphery of the nut, a first axial part defined on

10 the first opening side and a second axial part defined on
11 the second opening side bounded by the pair of slits, and
12 the female thread parts of the first and second axial
13 parts have the same shape parameter, and the direction of
14 the surface, in which the female thread part in the
15 second axial part is formed, is deviated from the axial
16 direction as a result of ~~by causing~~ plastic deformation
17 of the second axial part due to pressure that had been
18 exerted on the nut, wherein the second axial part and
19 slits are included in a second portion of the nut having
20 a smaller maximum outside diameter than a minimum outside
21 diameter of a first portion of the nut, said first
22 portion of the nut being formed to accept a tool used for
23 tightening and loosening the nut.

1 Claim 9 (currently amended): A nut having an internal
2 female thread, a first opening from which a male thread
3 to be screwed is inserted, and a second opening, from
4 which the inserted male thread gets out; wherein the nut
5 comprises at least a two pair pairs of slits formed at an
6 axial position closer to the second opening and such as
7 to be symmetrical with respect to the axis of the nut and
8 to radially partly penetrate the female thread from the
9 outer periphery of the nut, a first axial part defined on
10 the first opening side and a second axial part defined on
11 the second opening side bounded by the ~~pair~~ pairs of
12 slits, and the female thread parts of the first and
13 second axial parts have the same shape parameter, and the
14 width of the slit ~~is increased~~ increases as moving from
15 the outer periphery toward axis of the nut in the axial
16 direction, said second axial part being plastically

17 deformed, said variation in slit width caused by causing
18 plastic deformation of the second axial part.

1 Claim 10 (original): A nut having an internal female
2 thread, a first opening from which a male thread to be
3 screwed is inserted, and a second opening, from which the
4 inserted male thread gets out; wherein the nut comprises
5 at least a pair of slits formed at an axial position
6 closer to the second opening and such as to be
7 symmetrical with respect to the axis of the nut and to
8 radially partly penetrate the female thread from the
9 outer periphery of the nut, a first axial part defined on
10 the first opening side and a second axial part defined on
11 the second opening side bounded by the pair of slits, the
12 female thread parts of the first and second axial parts
13 have the same shape parameter, and the direction of the
14 surface, in which the female thread part in the second
15 axial part is formed, is deviated from the axial
16 direction, and the maximum outer diameter of the second
17 axial part is smaller than the minimum outer diameter of
18 the first axial part.

1 Claim 11 (original): A nut having an internal female
2 thread, a first opening from which a male thread to be
3 screwed is inserted, and a second opening, from which the
4 inserted male thread gets out; wherein the nut comprises
5 at least a pair of slits formed at an axial position
6 closer to the second opening and such as to be
7 symmetrical with respect to the axis of the nut and to
8 radially partly penetrate the female thread from the
9 outer periphery of the nut, a first axial part defined on
10 the first opening side and a second axial part defined on

11 the second opening bounded by the pair of slits, and the
12 female thread parts of the first and second axial parts
13 have the same shape parameter, the second axial part
14 being plastically deformed to increase the width of the
15 slits toward the axis of the nut; and the maximum outer
16 diameter of the second axial part is set to be smaller
17 than the minimum outer diameter of the first axial part.

1 Claim 12 (previously presented): The nut according to
2 claim 7, wherein the outer periphery of the second axial
3 part is circular in shape.

1 Claim 13 (previously presented): The nut according to
2 claim 7, wherein the first and second axial part have
3 substantially the same shape.

1 Claim 14 (previously presented): The nut according to
2 claim 7, wherein the female thread part formation surface
3 direction of the second axial part is set to be outward
4 from the axis of the nut.

1 Claim 15 (currently amended): The nut according to claim
2 7, wherein the at least two pairs ~~as the pair~~ of slits a
3 ~~plurality of slit pairs~~ are formed at predetermined
4 positions uniformly subtending the circumference.

1 Claim 16 (previously presented): The nut according to
2 claim 7, wherein the maximum outer diameter of the second
3 axial part is smaller than the minimum outer diameter of
4 the first axial part.

Claim 17 (canceled)

1 Claim 18 (new): The loosening-proof nut according to
2 claim 1, wherein the more than two slits are three slits,
3 spaced 120 degrees apart, and located at an axial
4 position on the upper side of the axial center position
5 of the nut body.

1 Claim 19 (new): The loosening-proof nut according to
2 claim 1, wherein the more than two slits comprise
3 multiple pairs of slits.

1 Claim 20 (new): The loosening-proof nut according to
2 claim 19, wherein the multiple pairs of slits are located
3 at an axial position on the upper side of the axial
4 center position of the nut body.

1 Claim 21 (new): A loosening-proof nut according to claim
2 2, wherein a distance b between the bottoms of the first
3 and second slit is in a range of 0.15 to 0.8 times the
4 nominal diameter d .

1 Claim 22 (new): The loosening-proof nut according to
2 claim 2, wherein the lower portion of the nut body is one
3 of a hexagon and square shape are viewed from above.

1 Claim 23 (new): The loosening-proof nut according to
2 claim 2, wherein the lower portion of the nut body is
3 formed to accept a tool used for tightening and loosening
4 the nut.

1 Claim 24 (new): The loosening proof nut according to
2 claim 5, wherein the angle is slanted and wherein the

3 angle and slant direction are selected to adjust reaction
4 forces of the first and second push parts.

1 Claim 25 (new) A loosening-proof nut comprising a nut
2 body having a central female thread with a nominal
3 diameter d , the nut body having a hexagon outer shape
4 defining six faces, the nut body also having two slits, a
5 first and a second slit, formed such as to be symmetrical
6 with respect to the axis of the nut, the two slits
7 radially penetrate the female thread from the outer
8 periphery of the nut, wherein each of the slits are
9 located at an axial position on an upper side of an axial
10 center position of the nut body, wherein each of the
11 slits cuts through two full faces and two partial faces
12 of the nut body, and wherein the slits define push parts,
13 which have been bent downward resulting in plastic
14 deformation, the push parts consist of a first and a
15 second push part defined in an upper part of the nut body
16 by the first and second slit.

1 Claim 26 (new): The loosening proof nut according to
2 claim 4, wherein said plastic deformation and said
3 difference in gap width s and g result in asymmetric
4 retaining tension levels of the locking feature depending
5 upon nut rotation direction.

Amendments to the Drawings:

The attached sheets of drawings include proposed new drawings (Figures 5A-7).

Attachment: Sheets of proposed new drawings